



All Databases

PubMed

Nucleotide

Protein

Genome

Structure

OMIM

PMC

Journals

Books

Search **PubMed** for

Go

Clear

Limits

Preview/Index

History

Clipboard

Details

Display **Abstract**

Show 20

Sort by

Send to

All: 1

Review: 0



About Entrez  
NCBI Toolbar

Text Version

Entrez PubMed  
Overview  
Help | FAQ  
Tutorials  
New/Noteworthy  
E-Utilities

PubMed Services  
Journals Database  
MeSH Database  
Single Citation Matcher  
Batch Citation Matcher  
Clinical Queries  
Special Queries  
LinkOut  
My NCBI

Related Resources  
Order Documents  
NLM Mobile  
NLM Catalog  
NLM Gateway  
TOXNET  
Consumer Health  
Clinical Alerts  
ClinicalTrials.gov  
PubMed Central

1: Biochemistry. 1982 Sep 14;21(19):4535-40.

[Related Articles](#). [Links](#)

## Reversible denaturation of Aequorea green-fluorescent protein: physical separation and characterization of the renatured protein.

Ward WW, Bokman SH.

The green-fluorescent protein (GFP) that functions as a bioluminescence energy transfer acceptor in the jellyfish *Aequorea* has been renatured with up to 90% yield following acid, base, or guanidine denaturation. Renaturation, following pH neutralization or simple dilution of guanidine, proceeds with a half-recovery time of less than 5 min as measured by the return of visible fluorescence. Residual unrenatured protein has been quantitatively removed by chromatography on Sephadex G-75. The chromatographed, renatured GFP has corrected fluorescence excitation and emission spectra identical with those of the native protein at pH 7.0 (excitation lambda max = 398 nm; emission lambda max = 508 nm) and also at pH 12.2 (excitation lambda max = 476 nm; emission lambda max = 505 nm). With its peak position red-shifted 78 nm at pH 12.2, the *Aequorea* GFP excitation spectrum more closely resembles the excitation spectra of *Renilla* (sea pansy) and *Phialidium* (hydromedusan) GFPs at neutral pH. Visible absorption spectra of the native and renatured *Aequorea* green-fluorescent proteins at pH 7.0 are also identical, suggesting that the chromophore binding site has returned to its native state. Small differences in far-UV absorption and circular dichroism spectra, however, indicate that the renatured protein has not fully regained its native secondary structure.

PMID: 6128025 [PubMed - indexed for MEDLINE]

Display **Abstract**

Show 20

Sort by

Send to

[Write to the Help Desk](#)

[NCBI](#) | [NLM](#) | [NIH](#)

Department of Health & Human Services

[Privacy Statement](#) | [Freedom of Information Act](#) | [Disclaimer](#)

Mar 6 2006 04:31:02

**BEST AVAILABLE COPY**